UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 8
1595 Wynkoop Street
Denver, CO 80202-1129
Phone 800-227-8917
www.epa.gov/region8

October 29, 2020

Ref: 8WD-CWQ

SENT VIA EMAIL
DIGITAL READ RECEIPT REQUESTED

Sandy Scherer, Legal Secretary
Montana Department of Environmental Quality
1520 E. Sixth Avenue
P.O. Box 200901
Helena, Montana 59620-0901

Dear Ms. Scherer:

This letter provides the comments of U.S. Environmental Protection Agency (EPA) for the public comment period on Montana's proposed selenium site-specific water quality standards (WQS) applicable to Lake Koocanusa and the Kootenai River.

EPA commends the Department of Environmental Quality (DEQ) for collaborating with multiple stakeholders in Montana and British Columbia for over five years to develop a site-specific selenium water column element for Lake Koocanusa consistent with the mechanistic model approach recommended by EPA. EPA supports adoption of the proposed selenium criteria for Lake Koocanusa and the Kootenai River with the following comments.

EPA Clean Water Act Section 304(a) Recommended Criterion for Selenium:

EPA's water quality criterion for selenium[1],developed by EPA in accordance with Clean Water Act (CWA) Section 304(a), provides recommendations to states and authorized tribes to establish water quality standards pursuant to the CWA. EPA recommends states/tribes adopt one selenium criterion composed of four criterion elements: two fish tissue criterion elements (egg-ovary and whole-body and/or muscle) and two water column criterion elements (30-day average and intermittent exposure). The water column criterion elements are further refined into values for lentic waters (e.g., lakes/reservoirs) and lotic waters (e.g., streams/rivers) because selenium bioaccumulates differently in these two water body types. Adopting all four criterion elements ensures protection when fish tissue data are unavailable. EPA recognizes selenium bioaccumulation potential depends on the structure of the food web and several biogeochemical factors that characterize a particular aquatic system. Uncertainty in the translation of the egg-ovary criterion element to the water column element can be reduced by

[1] See www.epa.gov/wqc/aquatic-life-criterion-selenium.

deriving a site-specific criterion that uses site-specific selenium data and information on foodweb dynamics from a biological assessment of the aquatic system.[2]

EPA Comments Regarding Montana Proposed Site-Specific Selenium Criterion:

- Montana's proposed rule uses the term "standards" when referring to the water column and fish tissue criterion elements. EPA recommends using the term "elements" or "criterion elements" in the rule language to clarify that the fish tissue and water column criterion elements are separate elements of the single selenium criterion rather than individual water quality criteria.

- The proposed rule includes this definition: "'Steady state' means, for the purposes of [NEW RULE I], conditions whereby there are no activities resulting in new, increasing, or changing selenium loads to the lake or river aquatic ecosystem, and selenium concentrations in fish living in the aquatic ecosystem have stabilized." EPA suggests the state consider whether it would be beneficial to clarify whether "activities" includes only anthropogenic activities.

- The proposed rule does not include the intermittent exposure water column criterion element. EPA recommends adopting the intermittent exposure water column criterion element to protect Lake Koocanusa and the Kootenai River if, in the future, intermittent discharges occur into those waters. If Montana chooses to proceed without this element, please provide an explanation for how the state intends to implement the selenium criterion to protect the applicable designated uses without this element.

- EPA recommends states/tribes adopt a selenium criterion that clearly indicates the egg-ovary criterion element supersedes any other criterion element because egg and ovarian tissue is the location of selenium toxicity and their selenium concentrations are most strongly correlated with larval deformity and mortality. The egg-ovary criterion element served as the basis for deriving all the other criterion elements. EPA also recommends the whole-body/muscle criterion element supersedes the water column criterion elements because whole-body/muscle concentrations provide a more robust and direct indication of potential selenium effects in fish than water concentrations. The proposed rule states "Egg/ovary tissue standards supersede any muscle or whole-body standards, as well as the water column standards in (7), when fish egg/ovary samples are available and when the aquatic ecosystem is in steady state." EPA suggests adding rule text specifying that muscle or whole-body criterion elements also supersede the water column criterion element when the aquatic ecosystem is in steady state.

- The proposed rule only includes duration and frequency components for the water column element. EPA recommends adding rule text specifying the duration and frequency for the fish tissue elements. For the fish tissue elements, EPA's recommended duration and frequency is an instantaneous measurement, not to be exceeded.

[2] Appendix K provides recommendations and examples for developing site-specific selenium criteria (p. 737 of pdf) at www.epa.gov/sites/production/files/2016-07/documents/aquatic_life_awqc_for_selenium_-_freshwater_2016.pdf.

- The statement of reason for NEW RULE I indicates a new nondegradation trigger value for selenium of 0.02 µg/L and footnote applying only to NEW RULE I will be incorporated into DEQ-7 as part of the current triennial review (anticipated completion in 2021). Based on this language and confirmation from DEQ, our understanding is that this change is not part of the current public comment period or rulemaking and will be open for public comment as part of the triennial review rulemaking.

We thank DEQ for its efforts to maintain and improve water quality in Montana. Please note that our positions are preliminary in nature and should not be interpreted as final EPA decisions under CWA § 303(c).

If you have any questions, please contact Tonya Fish on my staff at (303) 312-6832 or fish.tonya@epa.gov.

Sincerely,

ANDREW TODD

Digitally signed by ANDREW TODD
Date: 2020.10.29 12:56:14 -06'00'

Dr. Andrew Todd, Chief
Water Quality Section